

# High Frequency Ceramic Solutions

**2.45 GHz Impedance Matched Balun-Filter: Optimized for Nordic's Chipset**  
**nRF24L01, nRF24L01+, nRF24LE1, nRF24LU1, nRF24AP2, and nRF8001**

P/N 2450BM14A0002

Detail Specification: 6/13/2012

Page 1 of 2

General Specifications	
Part Number	2450BM14A0002
Frequency (MHz)	2400 - 2500
Unbalanced Impedance	50 $\Omega$
Differential Balanced Impedance	Imp. Conjugate match to Nordic nRF24L01, nRF24L01+, nRF24LE1, nRF24LU1, nRF24AP2, and nRF8001
Attenuation: Differential Mode	15 min.@4800~5000MHz 15 min.@7200~7500MHz
Attenuation: Common Mode	20 min.@4800~5000MHz

Insertion Loss	2.0 dB max.
Return Loss	9.5 dB min.
Phase Difference	160° $\pm$ 15°
Amplitude Difference	3.5 $\pm$ 1.5 dB
Reel Quantity	4,000
Operating Temperature	-40 to +85°C
Recommended Storage Conditions	+5 to +35°C, Humidity: 45-75%RH, 18 mos. Max

## Part Number Explanation

P/N Suffix	Packaging Style*	Bulk	Suffix = S	Eg. 2450BM14A0002S
		T & R	Suffix = T	Eg. 2450BM14A0002T
Termination Style	100% Tin	Suffix = None	Eg. 2450BM14A0002(T or S)	
	Tin / Lead	Please consult Factory		

For more packaging info go to: <http://www.johansontechnology.com/ipcpackaging.html>

## Mechanical Dimensions

	In	mm
L	0.063 $\pm$ 0.004	1.60 $\pm$ 0.10
W	0.031 $\pm$ 0.004	0.80 $\pm$ 0.10
T	0.024 $\pm$ 0.004	0.60 $\pm$ 0.10
a	0.008 $\pm$ 0.004	0.20 $\pm$ 0.10
b	0.008 +.004/-0.006	0.20 +0.1/-0.15
c	0.006 $\pm$ 0.004	0.15 $\pm$ 0.10
g	0.012 $\pm$ 0.004	0.30 $\pm$ 0.10
p	0.020 $\pm$ 0.002	0.50 $\pm$ 0.05

## Terminal Configuration

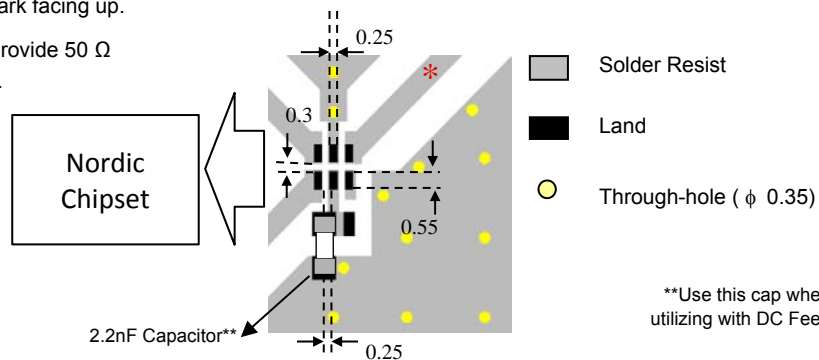
No.	Function
1	Unbalanced Port
2	GND
3	Balanced Port
4	Balanced Port
5	DC Feed+RF GND or GND
6	NC

## Mounting Considerations

Mount these devices with maroon mark facing up.

\* Line width should be designed to provide 50  $\Omega$  impedance matching characteristics.

Units: mm



Johanson Technology, Inc. reserves the right to make design changes without notice.  
 All sales are subject to Johanson Technology, Inc. terms and conditions.



[www.johansontechnology.com](http://www.johansontechnology.com)

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

2012 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

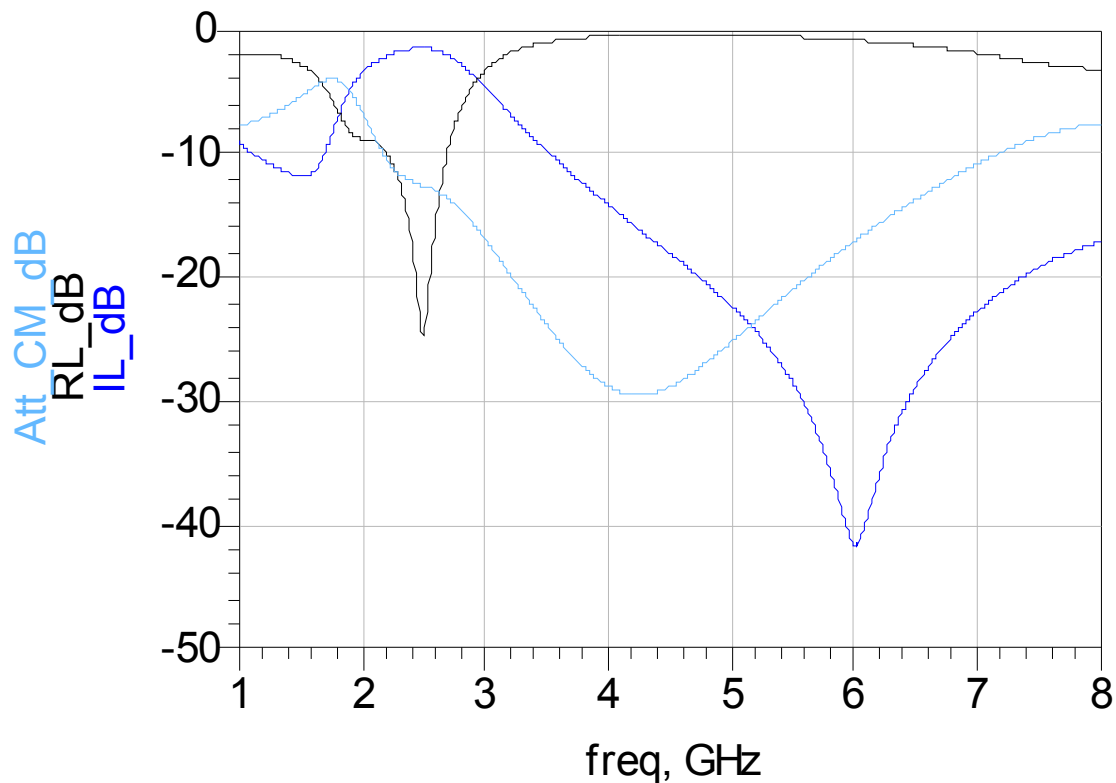
2.45 GHz Impedance Matched Balun-Filter: Optimized for Nordic's Chipset  
nRF24L01, nRF24L01+, nRF24LE1, nRF24LU1, nRF24AP2, and nRF8001

P/N 2450BM14A0002

Detail Specification: 6/13/2012

Page 2 of 2

## Typical RF Electrical Performance (T=25°C)



For reference design notes and additional technical info please visit our Nordic Semiconductor dedicated page at:

<http://johansontechnology.com/nordic>

Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



[www.johansontechnology.com](http://www.johansontechnology.com)

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

2012 Johanson Technology, Inc. All Rights Reserved